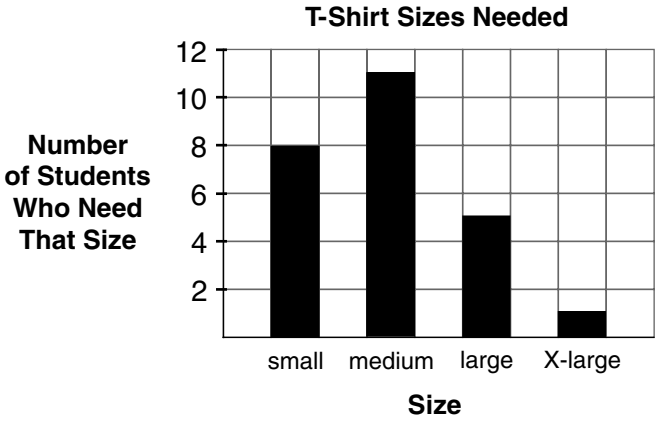
Asset #57092.000 **6380 - KY - Green River, Mathematics, Grade 6, SEQ #: 1 EQ: N**

Asset Type: Constructed Response / Calculator: Calculator Neutral
MA-06-1.3.01: Number Operations - Students will add, subtract, multiply, divide, and apply order of operations with whole numbers, fractions, and decimals to solve real-world problems. DOK-2

1. Students in Ms. Gwin's class want to order school T-shirts. The number of each size they need is shown on the graph below.



The prices of the T-shirts are shown below.

- $6.00 for a package of 4, all the same size
- $2.50 for each individual shirt

Copy the order form below into your Student Response Booklet.

Order Form

Size	Small	Medium	Large	X-Large
Number of packages of 4 shirts each ($6 per package)				
Number of individual shirts ($2.50 per shirt)				

a. Complete the order form in your Student Response Booklet so that
   - the order includes **at least** all the shirts that are needed and
   - the price of the entire order is the **lowest possible price**.

Show all your work. Explain how you know that the price of the order is the lowest possible price.

b. What is the price of the entire order? Show or explain how you found your answer.

Asset #57092.000 **6380 - KY - Green River, Mathematics, Grade 6, SEQ #: 1 EQ: N**

Scoring Guide

Score	Description
4	The student response demonstrates an exemplary understanding of the Number Properties and Operations concepts involved in solving real-world problems that require addition and multiplication of whole numbers and decimals.
3	The student response demonstrates a good understanding of the Number Properties and Operations concepts involved in solving real-world problems that require addition and multiplication of whole numbers and decimals. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result the response merits 3 points.
2	The student response demonstrates a fair understanding of the Number Properties and Operations concepts involved in solving real-world problems that require addition and multiplication of whole numbers and decimals. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 2 points.
1	The student response demonstrates a minimal understanding of the Number Properties and Operations concepts involved in solving real-world problems that require addition and multiplication of whole numbers and decimals.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

Training Notes

Parts a and b:

Order Form

Size	Small	Medium	Large	X-Large
Number of packages of 4 shirts each ($6 per package)	2	3	1	
Number of individual shirts ($2.50 per shirt)			1	1
Total Price	$12	$18	$8.50	$2.50

Since packages are cheaper than 3 or 4 individual shirts, I used packages when the package was cheaper than the number of individual shirts I needed. Total Price: $41.00

16.

A

Size	Small	Medium	Large	X-large
number of packages of 4 shirts each (#6 per pack)	2	3	2	1
Number of individual shirts (#2.50 per shirt)	0	11	5	1

= 8 packages at #48
-or-
= 25 shirts at #62.50

— or —

	SM	MED	LG	X-LG
packages of 4 shirts at #6 a pack	2	3	1	
individual shirts at #2.50 a shirt			1	1

= #36 for 6 packs
= #5 for 2 shirts

Total price of shirts = #41

B This is the lowest price possible because I didn't spend #6 more dollars for a package when all I needed was one shirt. Two packs of smalls is all I needed because there were 8 shirts even. Three packs of medium is cheaper than two packs and three individuals One package of large and one individual was cheaper than two packs of large. Only one person wanted x-large so I ordered a single.

Contract: 6351 Math	**Grade:** 06	**Content:** Math
Booklet: 1402330297	**Response Code:** MA01116	T
4		

4 shows correct totals for all indiv, all packs and the correct mix w/ expl., no addition shown

16.

order form

Size	sm.	medium	large	Xlarge
# of packages of 4 shirts each (for package)	$12.00	$18.00	$16.00	
# of individual shirts (@ $5 per shirt)			$2.50	$2.50

total $41.00

*1 added them together 211

Contract: 6351 Math	**Grade:** 06	**Content:** Math
Booklet: 1402330245	**Response Code:** MA01116	
3		T

a. correct totals - implied # packs + indiv shirts ordered

b. correct ans., no work shown

3

16.

Size	small	medium	large	x-large
Number of packages of 4 shirts each ($16 per package	2	3	1	0
Number of individual shirts ($2.50 per shirt	0	0	1	1

small = 8 shirts
2 packages = $16 dollars
8 shirts seperate = $20

Medium = 11 shirts
3 packages = $48
1 extra
2 packges = $12
3 seperate $7.50 $19.50

Large = 5 shirts
2 packages = $12
1 package w/1 individual = $18.50

X-Large = 1 shirt
1 individual = $2.50
1 package = $6.00

Contract: 6351 Math **Grade:** 06 **Content:** Math
Booklet: 1402330161 **Response Code:** MA01116
2

T

a- completely correct
b- no final total given - minor error / omission?

2

3 for strategy added correction

16

size	Small	Medium	Large	X-L
Number of packages of 4 shirts ($16 per package)	2	2	1	0
Number of individual shirts ($2.50 per shirt)	0	3	1	1

Total- $\frac{2}{2}$ $\frac{2}{5}$

5·6=30 $\frac{3}{1}$ $\frac{1}{5}$ 5·2.5=12.50

30.00
12.50
42.50

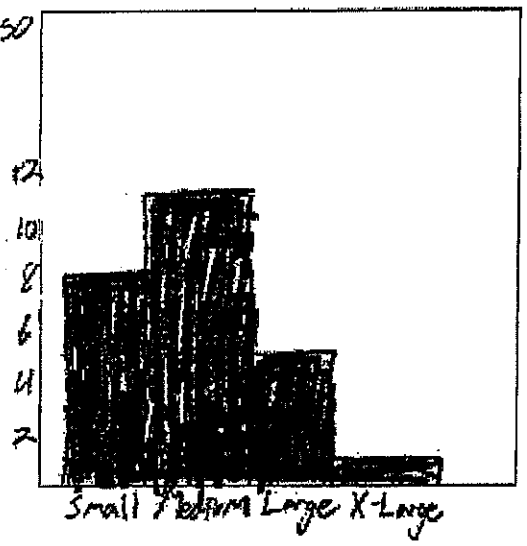
Total=$42.50

Small- 4|8 2

Medium- 4|11 2R3

Large- 4|5 1R1

X-Large- 4|3 0R3



Contract: 6351 Math	**Grade:** 06	**Content:** Math	
Booklet: 1402330172 3	**Response Code:** MA01116		A

a- common error in medium

b- correct total, no expl. of rndg vs. packs

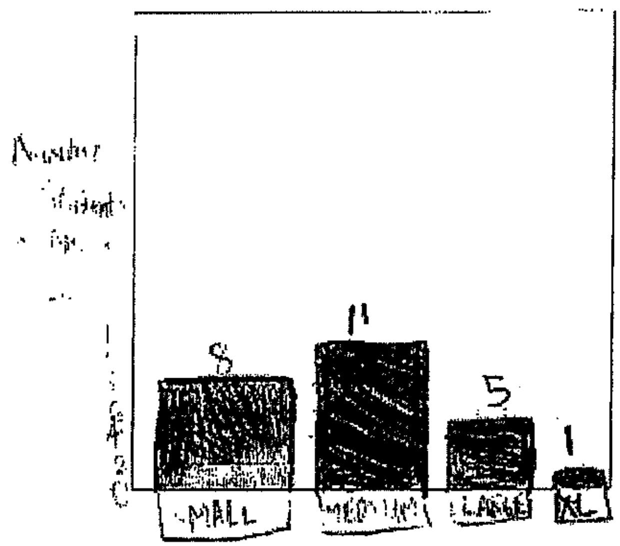
3?

2

16.

SIZE	SMALL	MEDIUM	LARGE	X-L
# of [illegible]	1	1	0	0
NUMBER OF [illegible] ([illegible])	2	2	1	0

TOTAL: $24.50



Contract: 6351 Math	**Grade:** 06	**Content:** Math
Booklet: 1402330386	**Response Code:** MA01116	A
1		

a- only 21 total and all are too low

b- correct total based on a

1

16.

8+11+5+1=25

$2.50 × 25 = $62.5

62.5 - 37.5 = 25

$6.25
4 | 25

6.25 × 6 = $37.5

The package of 4 because it is $25 cheaper.

Contract: 6351 Math	**Grade:** 06	**Content:** Math
Booklet: 1402330258	**Response Code:** MA01116	
1/2?		T

a-} correct # indiv. shirts and correct total but thinks they
b-} can break up 4-packs and also does not take into account different sizes in calculation (just 25÷4)

still a 2?

1

16.

Small	Medium	Large	X-large
8	11	5	1

$103

add 2.50 8 times
plus

Contract: 6351 Math	**Grade:** 06	**Content:** Math
Booklet: 1402330230	**Response Code:** MA01116	A
2		

a- ? gives total indiv. for each size - meets conditions of at least 25 total and enough in each size

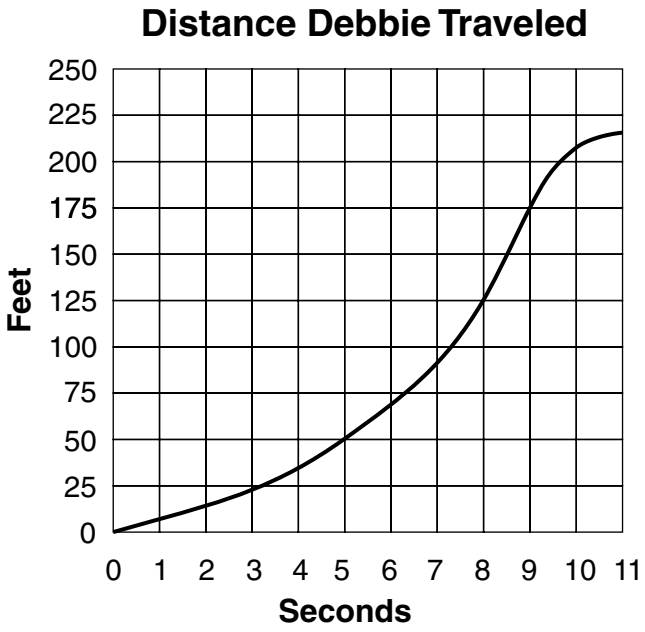
b- 0

2 ? meets 2 conditions but not more than "simply repeating the given data" which would not be enough for a 1

0

Asset Type: Constructed Response / Calculator: Calculator Neutral
MA-06-4.1.01: Representations of Data Sets - Students will analyze and make inferences from data displays (drawings, tables/charts, pictographs, bar graphs, circle graphs, line plots, Venn diagrams, line graphs, stem-and-leaf plots). DOK-3

2. The graph below shows the distance Debbie traveled on her motorcycle in the first 11 seconds after start-up.



a. According to the graph, about how many feet did Debbie travel in the first 8 seconds?
b. About how many seconds did it take Debbie to travel the first 50 feet?
c. During the one-second interval between 4 and 5 seconds, Debbie traveled about 15 feet. During which one-second interval did Debbie travel the greatest distance? Explain how you found your answer.

Asset #57143.000 **6380 - KY - Green River, Mathematics, Grade 6, SEQ #: 2 EQ: N**

Scoring Guide

Score	Description
4	The student response demonstrates an exemplary understanding of the Data Analysis and Probability concepts involved in analyzing line graphs.
3	The student response demonstrates a good understanding of the Data Analysis and Probability concepts involved in analyzing line graphs. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result the response merits 3 points.
2	The student response demonstrates a fair understanding of the Data Analysis and Probability concepts involved in analyzing line graphs. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 2 points.
1	The student response demonstrates a minimal understanding of the Data Analysis and Probability concepts involved in analyzing line graphs.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

Training Notes

Sample Response:

Part a: 125 feet

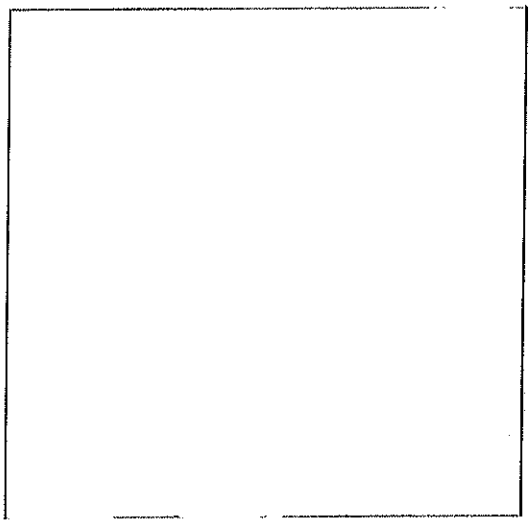
Part b: 5 seconds

Part c: Between 8 and 9 seconds she traveled 50 feet and that is greater than the amount she traveled in any other 1 second interval.

16. A) 125 ft

B) 5 seconds

C) 8 and 9 seconds, because the line is almost straight up and down.



Contract: 6351 Math	**Grade:** 04	**Content:** Math
Booklet: 1401331584	**Response Code:** MA02316	
4		

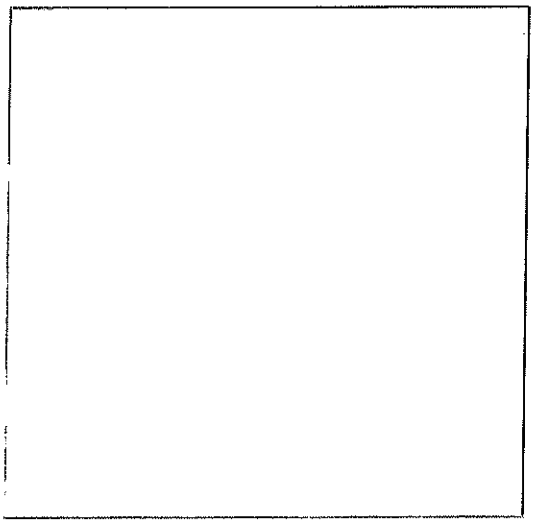
4 A

16.

a) 1125 feet

b) 5 seconds

c) 8, 9. Looked at the y-value



Contract: 6351 Math Grade: 04 Content: Math
Booklet: 1401331520 Response Code: MA02316
3

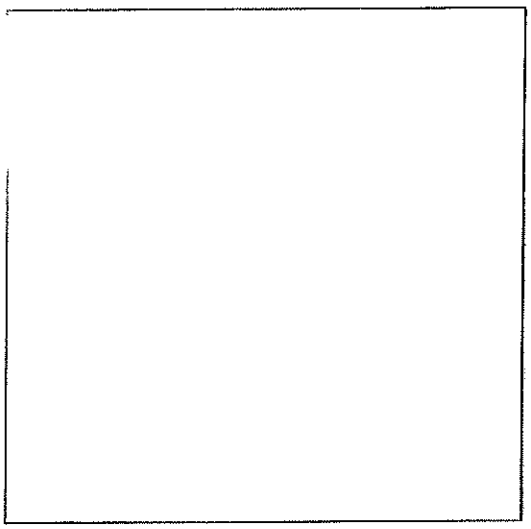
a-1
b-1
c-1 ans only

3

16. a. 175 Ft.

B. about 5 seconds

C. 8 and 9



Contract: 6351 Math **Grade:** 04 **Content:** Math

Booklet: 1401332313 **Response Code:** MA02316

T2

a-0

b-1

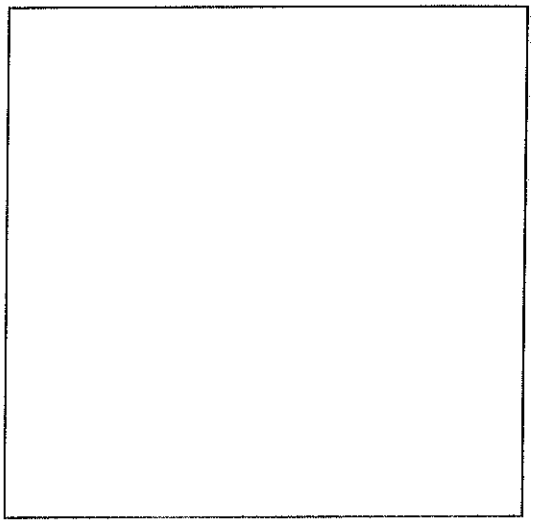
c-1 ans only

2

T

16.

a 125
b 5
c 9 bc it goes up



Contract: 6351 Math	**Grade:** 04	**Content:** Math
Booklet: 1401331563	**Response Code:** MA02316	
3		

a-1
b-1
c-1 9-only

C = 0

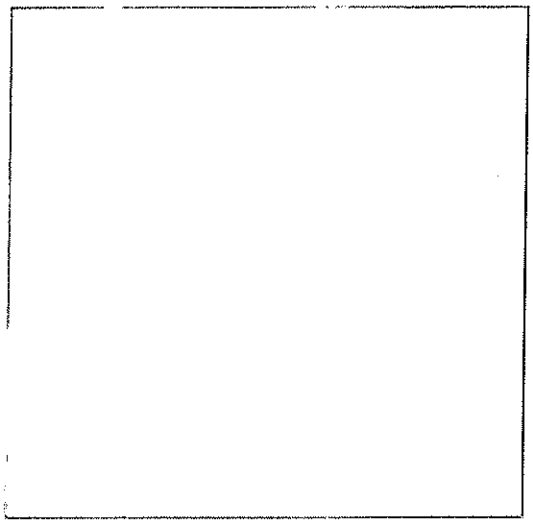
1 pt

3

16. A. She traveled 125 feet in the first 8 seconds

B. It took her 5 seconds to travel the first 50 feet.

C. She traveled the greatest distance between 5 and 6 seconds. I found my answer by seeing which square the line went through the most diagnaly.



Contract: 6351 Math **Grade:** 04 **Content:** Math
Booklet: 1401330808 **Response Code:** MA02316
1,10

a - 1
b - 1
c - 0

(2)

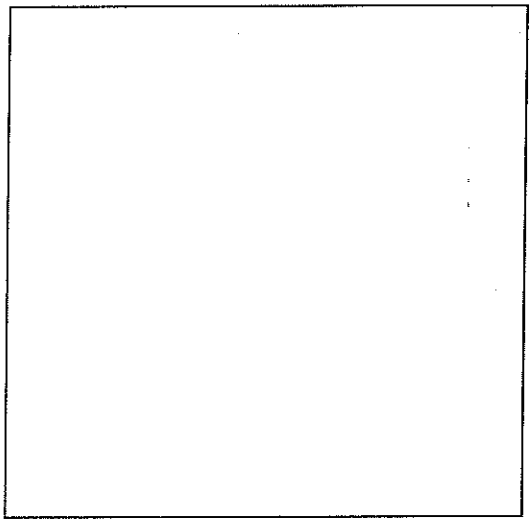
A

16.

a.) 125 feet

b.) on second

c.) 212



Contract: 6351 Math	**Grade:** 04	**Content:** Math
Booklet: 1401331093	**Response Code:** MA02316	
1		

a - 1

b - ~~0~~

c ~~0~~

(1)

A

16. A. 25 feet

B. 5 sec.

C. 11 sec it's the highest

Contract: 6351 Math	**Grade:** 04	**Content:** Math
Booklet: 1401332074	**Response Code:** MA02316	
1		

a - Ø

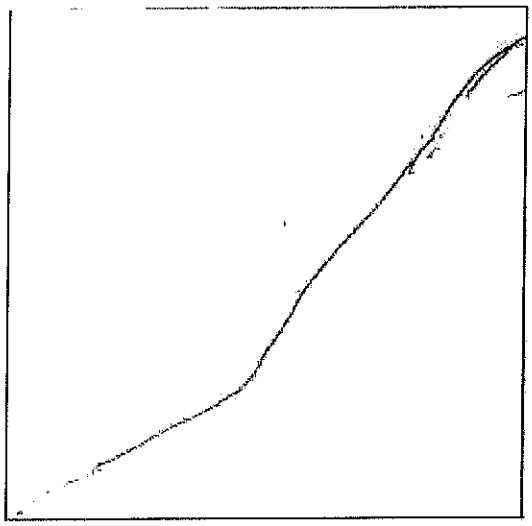
b - 1

c - Ø

1

1

16.



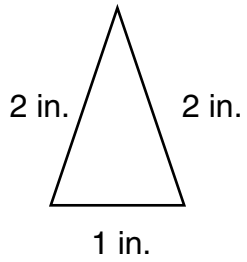
Contract: 6351 Math **Grade:** 04 **Content:** Math

Booklet: 1401332858 **Response Code:** MA02316

0

Asset Type: Constructed Response / Calculator: Calculator Neutral
MA-06-3.2.01: Transformations of Shapes - Students will describe, provide examples of, and apply line symmetry to real-world and/or mathematical situations.

3. The triangle below has exactly one line of symmetry.



a. Copy the triangle into your Student Response Booklet. Draw the triangle's line of symmetry.

Jeff said that triangles always have exactly one line of symmetry.

Randy said that triangles can have no lines of symmetry, exactly one line of symmetry, or more than one line of symmetry.

b. Who is correct? To explain your response,

- sketch triangles,
- label the lengths of the sides, and
- draw the lines of symmetry.

c. Sketch a polygon that has **exactly** 4 lines of symmetry. Use dotted lines to show the four lines of symmetry.

BE SURE TO LABEL YOUR RESPONSES a, b, AND c.

Asset #57151.000 **6380 - KY - Green River, Mathematics, Grade 6, SEQ #: 3 EQ: N**

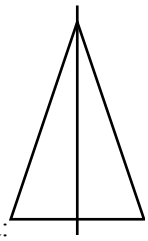
Scoring Guide

Score	Description
4	The student response demonstrates an exemplary understanding of the Geometry concepts involved in providing examples of line symmetry and applying line symmetry to solve and justify mathematical problems.
3	The student response demonstrates a good understanding of the Geometry concepts involved in providing examples of line symmetry and applying line symmetry to solve and justify mathematical problems. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result the response merits 3 points.
2	The student response demonstrates a fair understanding of the Geometry concepts involved in providing examples of line symmetry and applying line symmetry to solve and justify mathematical problems. While some aspect of the task are completed correctly, others are not. The mixed evidence provided by the student merits 2 points.
1	The student response demonstrates a minimal understanding of the Geometry concepts involved in providing examples of line symmetry and applying line symmetry to solve and justify mathematical problems.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

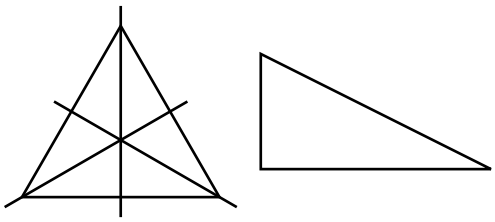
Training Notes

Sample Response:

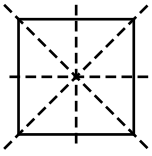
Part a:



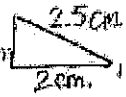
Part b: Scalene triangles do not have a line of symmetry and equilateral triangles have 3 lines of symmetry.



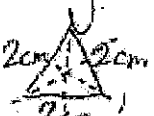
Part c:



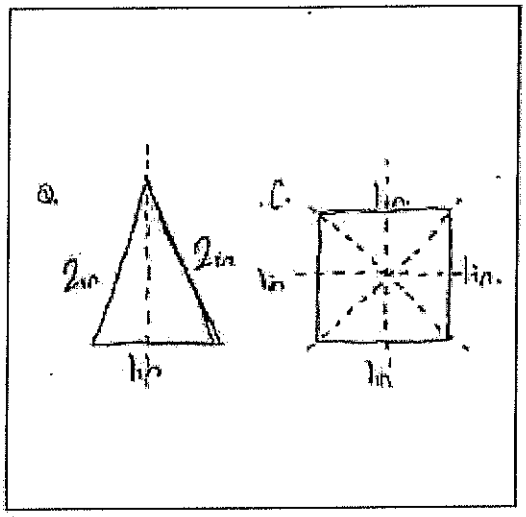
16.

b. Randy is correct. This triangle 

has no line of symmetry. This one, 

, has one line of symmetry. This one, 

, has multiple lines of symmetry. Jeff said that triangles always have one, but, because there are many different types of triangles, they can have exactly one, none, or multiple lines of symmetry.



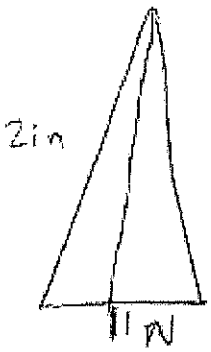
Contract: 6351 Math **Grade:** 07 **Content:** Math

Booklet: 1403334442 **Response Code:** MA03116

4

9 A

16.



1 line of Symmetry

Randy is correct. The lines depend on the kind of triangle.

Equilateral
3 lines of Symmetry

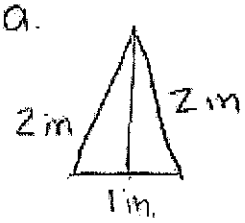
Square

Contract: 6351 Math **Grade:** 07 **Content:** Math
Booklet: 1403333151 **Response Code:** MA03116
3

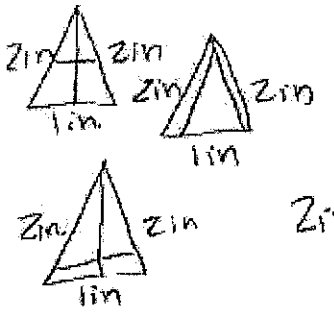
omitted scalene

1 1/2/4 (3) A

16. a.



b.



b.

Jeff is correct

c.

Contract: 6351 Math	**Grade:** 07	**Content:** Math
Booklet: 1403333962	**Response Code:** MA03116	
2 a + c		

1 0 2/3 (2) A

16.

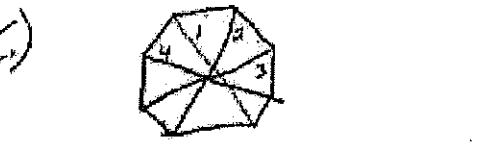
A) 2in 2in 1in

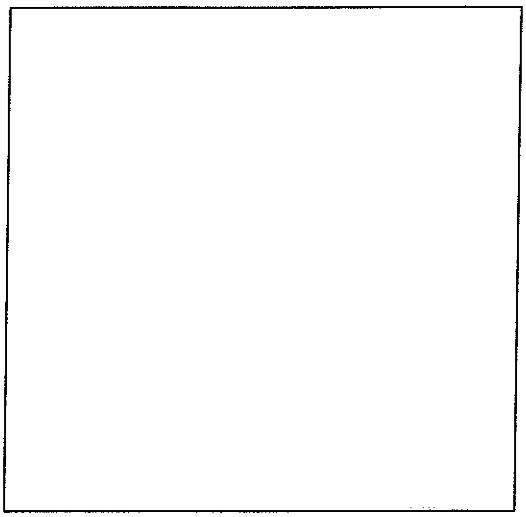
line of symmetry example

symmetry

B) Randy is correct 3in 3in 2in

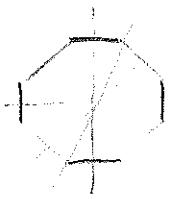
C)





Contract: 6351 Math	**Grade:** 07	**Content:** Math
Booklet: 1403333102	**Response Code:** MA03116	

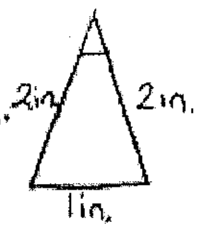
2 a and c



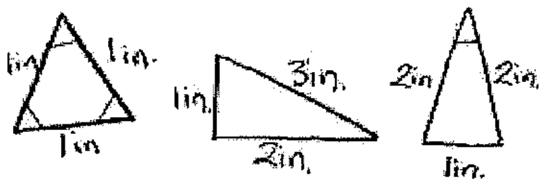
octagon has 8

16.

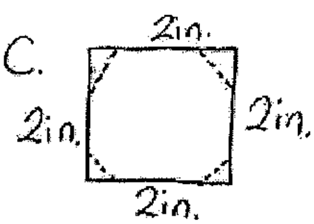
a.



b. Randy



c.

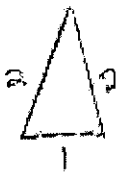


Contract: 6351 Math	**Grade:** 07	**Content:** Math
Booklet: 1403335678	**Response Code:** MA03116	
1 b – scalene		

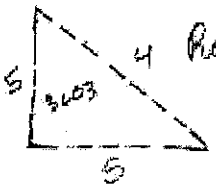
1 SL

middle one is scalene

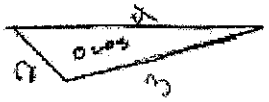
16. a.



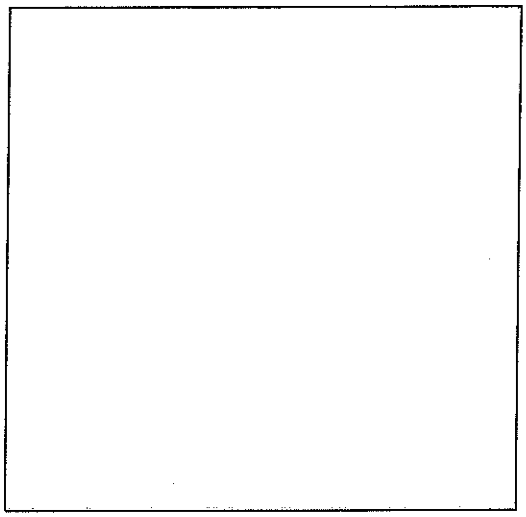
b.



Rarely in context.



c.



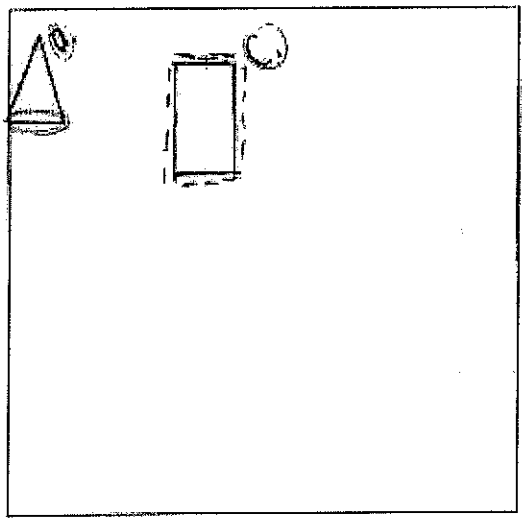
Contract: 6351 Math	**Grade:** 07	**Content:** Math
Booklet: 1403333588	**Response Code:** MA03116	

1 C correct shape

0
0
1
1

(1)

16. A. The triangle's line of symmetry is its bottom line.



Contract: 6351 Math **Grade:** 07 **Content:** Math

Booklet: 1403333624 **Response Code:** MA03116

0

Asset #57756.000 **6380 - KY - Green River, Mathematics, Grade 6, SEQ #: 4 EQ: N**

Asset Type: Constructed Response / Calculator: Non-Calculator
MA-06-1.3.01: Number Operations - Students will add, subtract, multiply, divide, and apply order of operations with whole numbers, fractions, and decimals to solve real-world problems. DOK-2

4. A total of 132 sixth-grade students are going on a field trip. They may go by vans only, by buses only, or by vans and buses. The chart below gives information about the two types of vehicles.

Type of Vehicle	Number of Students Vehicle Can Hold	Cost per Day
Van	9	$65
Bus	48	$300

List **all** the different combinations of vehicles that can be used to take the 132 students on the field trip. Show your work. (You do not need to count drivers and chaperones.)

What is the **least** amount of money that it will cost to use the vehicles to take the students on the field trip? Show or explain how you found your answer.

Asset #57756.000 **6380 - KY - Green River, Mathematics, Grade 6, SEQ #: 4 EQ: N**

Scoring Guide

Score	Description
4	The student response demonstrates an exemplary understanding of the Number Properties and Operations concepts involved in solving and justifying real-world problems that require multiplication and addition of whole numbers.
3	The student response demonstrates a good understanding of the Number Properties and Operations concepts involved in solving and justifying real-world problems that require multiplication and addition of whole numbers. Although there is significant evidence that the student was able to recognize and apply the concepts involved, some aspect of the response is flawed. As a result the response merits 3 points.
2	The student response demonstrates a fair understanding of the Number Properties and Operations concepts involved in solving and justifying real-world problems that require multiplication and addition of whole numbers. While some aspects of the task are completed correctly, others are not. The mixed evidence provided by the student merits 2 points.
1	The student response demonstrates a minimal understanding of the Number Properties and Operations concepts involved in solving and justifying real-world problems that require multiplication and addition of whole numbers.
0	Response is incorrect or contains some correct work that is irrelevant to the skill or concept being measured.
Blank	No response.

Training Notes

# Buses	# Vans	# Passengers	Cost
3	0	144 + 0 = 144	900 + 0 = $900
2	4	96 + 36 = 132	600 + 260 = $950
1	10	48 + 90 = 138	300 + 650 = $950
0	15	0 + 135 = 135	0 + 975 = $975

Part a: 3 buses – 0 vans, 2 buses – 4 vans, 1 bus – 10 vans, 0 buses – 15 vans

Part b: 3 buses with 0 vans cost $900.

2 buses with 4 vans cost $860.

1 bus with 10 vans cost $950.

0 buses with 15 vans cost $975.

16. a)

5 vans 3 buses	10 vans 1 bus
4 vans 2 buses	1 van 3 buses

b) $860

I multiplied each number of vans by 65 and each number of buses by $300 and added them and got my answer.

$300 × 3 = 900 − 132 = 48

215 × 65

$975

14 2/3 9)132.0

4)132

48 × 2 = 96 + 48 = 144

132 − 96 = 36

132 − 48 = 84

$950

265 × 4

300 × 2

$860.00

Contract: 6351 Math	Grade: 04	Content: Math
Booklet: 1401331585	Response Code: MA01316	

(4)

extra one
(No price for 1 van 3 buses)

a. 2 4 correct combos

b. 2 ans. + 4 correct costs

T

16.

A. 15 vans for $975 dollars.
3 buses for $900 dollars
2 buses and 4 vans for $860
1 bus and 10 vans for $633

Comp error s/b 950

B. I'd take 1 bus and 10 vans for $633.

48 x5 240

48)132

96 9 96 123

600 65 65 65 65 860

9)132

98 x3 144

48 x2 96

48

15 6 15 102

9 9 9 9 129

36 65 585

585 48 633

Contract: 6351 Math	Grade: 04	Content: Math	
Booklet: 1401331431	Response Code: MA01316		

③
a. 2 4 correct combos
b. 1 - 3 correct costs
chose 633 based on Comp. error in b. (costs)

T

16. a) $9\overline{)132}$ = 14 r.6

- 15 vans with 3 seats extra
- 3 buses with 12 seats extra
- 2 buses with 4 vans to have exactly 132 students fit in 6 vehicles.

$48\overline{)132}$; 132 − 96 = 36

48 × 3 = 144; 144 − 132 = 12

48 + 48 = 96; 96 + 96 = 192; 192 − 132 = 60

b) By using 2 buses and 4 vans you can fit 132 students in 6 vihicles and pay less. By using only 2 buses and 4 vans you have to pay $860.00 dollars, but if you use 3 buses to try fit 132 students you'll waste 900 dollars, and by using vans you'll waste more

b) 65 + 15 = 325; 650 → $975

300 × 3 = $900

300 × 2 = $600; $600 + 260 = $860

65 × 4 = $260

Contract: 6351 Math	**Grade:** 04	**Content:** Math	
Booklet: 1401331989	**Response Code:** MA01316		

3

a. 1 — 3 correct combos

b. 2 — ans. based on a

T

16.

a. if you take vans you would need 15 vans. if you take a bus you would need 4 buses. if you take both vans and buses you would need 2 buses and 4 vans.

b. The least amount of money would be $975.00 because the cost for a van is $65. $65 X 15 = 975, but the cost for a bus is $300. $300 X 4 = 1200.

65
X 15
+325
650
975

300
X 4
1200

48
X 2
96

14 r6
9)132
9
42
36
6

66
2)132
12
12
12
0

42
X 4
168

Contract: 6351 Math	Grade: 04	Content: Math
Booklet: 1401330809	Response Code: MA01316	

(2)

a. - 1 2 correct combos
b. - 1 2 costs

T

16. a – 10 vans = 90 students
1 bus = 48 students = 138
2 buses = 96 students = 138
4 vans = 36 students

b – 2 buses = $600
4 vans = $260
$860

the least they will spend is $860 because that holds exactly 138 students.

Contract: 6351 Math	**Grade:** 04	**Content:** Math
Booklet: 1401330875	**Response Code:** MA01316	

(2)

a. 1 (2 combos)

b. 1 ans,

A

16. A: 48 96 105 114 123 132
bus, bus, van, van, van, van

A= 2 buses + 4 vans

B: 300 65
+300 65
600 65
+65
260

600
+260
860

B=860 dollars because
600
+260
860 $

Contract: 6351 Math	**Grade:** 04	**Content:** Math
Booklet: 1401331244	**Response Code:** MA01316	

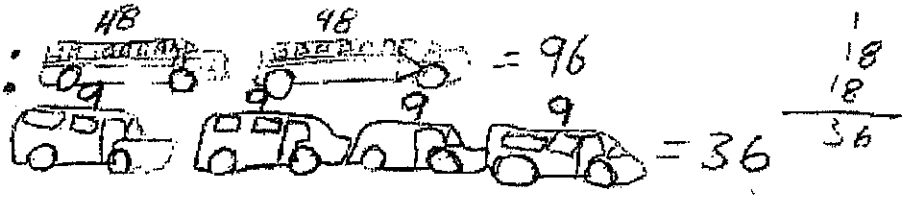
(1)

a - 0
b - 1

A

16.

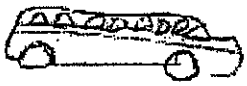
A: 48 48 = 96



= 36

1
18
18
36

1
96
36
132



= 132

B: 1
65
65
65
195
600
795

2 boxes grid
4 vans

Contract: 6351 Math	**Grade:** 04	**Content:** Math
Booklet: 1401332502	**Response Code:** MA01316	

(1)

a. 1 2 combos

b. 0

16.

d. Van or buses or both

$4\overline{)132}$

Contract: 6351 Math	**Grade:** 04	**Content:** Math
Booklet: 1401331390	**Response Code:** MA01316	

0

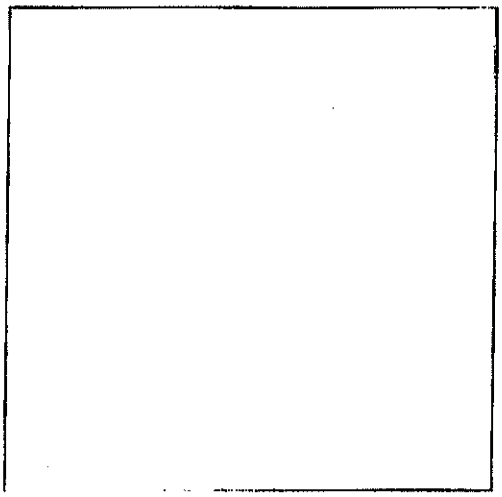
A

16. 132 Students

a) 1) 1,188 vans
2) 80 buses

b) 82
×300
000
0000
16600
16,600

$16,600.00



Contract: 6351 Math	**Grade:** 04	**Content:** Math
Booklet: 1401332576	**Response Code:** MA01316	

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